

A Circular Barn.

The style of barn buildings should in all cases be laid out to suit the requirements of the farm on which they are to be placed. The most important point is to so arrange the buildings that the least possible work is required in giving attention to the stock. This is necessary because the needful work must occupy the greater part of the year; and again there are times, such as Sundays, when all the work must fall to the lot of one or fewer hands than the usual quota, and yet nothing must be remitted in the way of comfort to the inmates. Plenty of room and ventilation should be provided for the stock, and provision must also be made for the storage of feed of all descriptions, with arrangements for handling this with convenience.

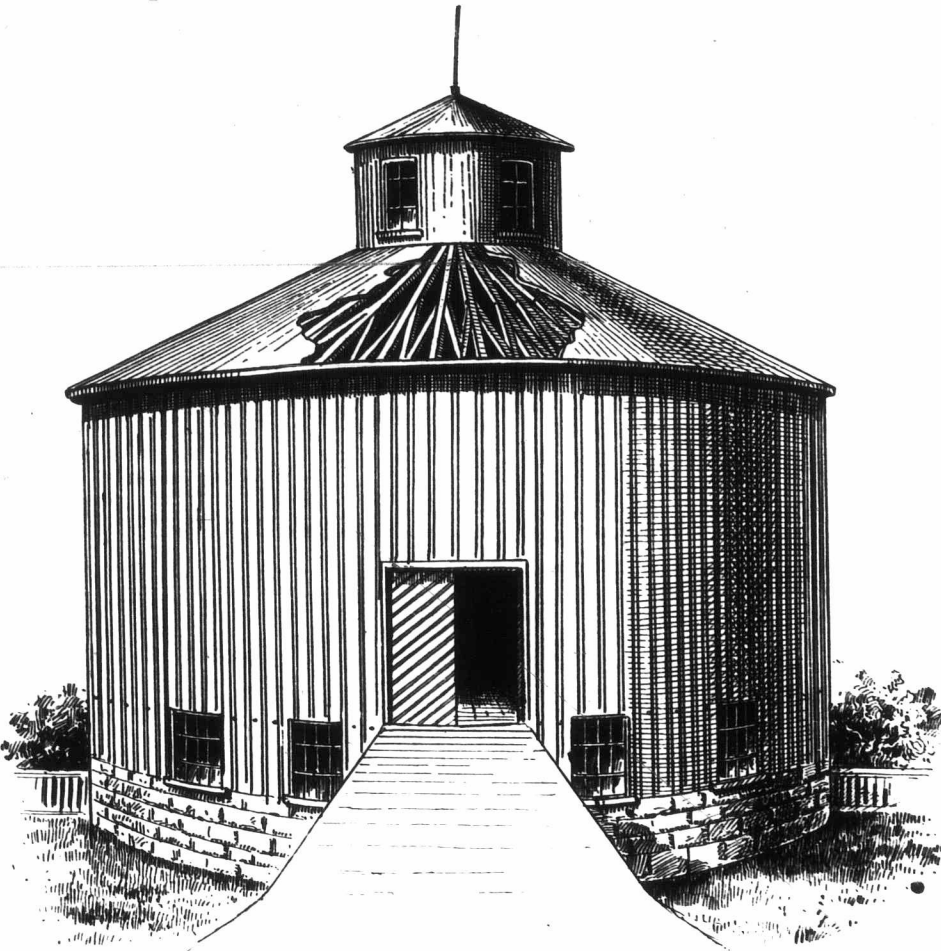
The circular form of building has many points that recommend it besides the advantageous manner in which it may be laid out inside, among which are the following:—The least possible studding and siding lumber to enclose a given space, the entire doing away with heavy timber, or timber of any great length, with the exception of the rafters, which may be sawn or hewed as is most convenient. The surface exposed gives the least possible pressure to the wind, as in no direction does it strike a flat surface, but glides past with an equal pressure on each side. Again the circular form is thoroughly braced, as each stud stands at a slightly different angle, and the inside construction all helps to stiffen it and make the whole as rigid as possible. The siding gives strength to the structure, just as in the hoops of the barrel lies its strength. While in the advantage of laying out the inside, may be mentioned the shortest distance to carry the feed to each animal, or one continuous track for a car can be arranged to deliver the feed, which starts from one point. Then, again, there is no form in which a silo can be so advantageously placed, as the greatest height, the most perfect strength can be thus obtained, together with the most equable pressure to the silage itself, as well as the most economical form for removing and feeding.

HOW TO BUILD.
Thorough drainage, both to the surroundings as well as inside the intended building, requires attention first. Neat, narrow drains, with a crease cut the exact size of the tile to be used, and on these should be placed one foot of fine, screened gravel, or small stones, to insure perfect drainage at all times. This plan also forms a good preparation under the concrete wall, which foundation must be laid below the frost line up to the surface of the ground, then stonework built up three feet in height. On this a two-inch sill is formed by nailing two one-inch boards together. On these the 2 x 6 studding is placed, plumbed and stayed, and on these is nailed horizontally V siding, and now the vast advantage the circle has in point of strength, each board as it is bent and nailed in the circle forms a tie that binds the whole structure. The remainder of the basement wall may be filled between the studding with concrete formed of a poorer material, the studs being boarded on the inside. This will make the basement thoroughly frost proof, and be equally strong and durable and less expensive than stone, especially in the cost of hauling material. Six

feet from the sill a 2x6 scantling is let into the studding on the inside for the joists to rest upon. The height above may be regulated by the amount of storage room required, but this is perfectly easy, as a building of this form can be carried any height desired by simply adding another length of studding, which is joined by merely nailing a 1x6-inch five-foot-long cleat on each side where the studding is joined. The studs are better to be of different lengths, joined at different heights, which will make a stiffer frame. The silo, which is twenty feet in diameter, is in the centre, and is built on the same principle as the outside wall. One foot of stone work upon a concrete foundation is all that is necessary, and 2x4 studding is sufficiently heavy. This should also be boarded horizontally on the outside, tar paper placed on this, and above the basement on the second flat another row of studding, on which another coating of tar paper is placed before the outer boards are nailed on, which gives two dead air spaces to

drop which should be six inches. In a circle and just immediately behind where the manger is to be placed the concrete floor should be deeper and stronger, though even at the surface, for here will rest the pillars to support the weight of the floor, together with that of all the stuff stored above. These pillars are formed by 2x10 oak plank, through which the boards of the stall partitions are built, which will support the weight above and hold securely the stall partitions. A cap is placed on the top of these pillars, on which again the joists rest. The stall partitions should be built next, and should be made of two inch plank. Five feet long, including the manger, is sufficient for cattle, the end next the drop will only require to be secured by a 2x4 cleat on each side and bolted securely on. The 2x10 plank for the pillars should also be bolted together after the stall partition planks are passed through, which will make them strong enough to hold up any weight required. By consulting the plan stalls for fifty-six head of

cattle will be found. These stalls are calculated at seven feet wide where the hind feet of the cattle stand, and for two cattle; but could be laid off at different sizes where all ages are kept. Four roomy box stalls are at convenient points on each side of the hallway running across the circle. The remainder of the space can be used for roots, and will hold about 2,000 bushels. There are many advantages in this space for roots; the long part of the circle is where they are put down from above, which saves labor in moving at hauling time, and as the doors for feeding these are opposite the shoots, the roots are fed from these points first, as here any dirt adhering to the roots is likely to accumulate, which causes them to heat. The end of the hallway goes up to the silo, and here the silo may be entered, and this hallway forms a good place for mixing up feed. The cut hay, straw, and ensilage are all supplied from above. There is plenty of room behind the cattle for using a boat or narrow cart for hauling out the manure, and the building can be kept in a



The Cupola shown above the roof is an extension of the studding of the silo wall, to which the upper ends of the rafters are attached.

the wall above the stable, one being sufficient below. Between the outside studs will be found a good place for ventilating the building by leaving openings immediately underneath the floor above the stable. This will carry off the heated air just as is required, by having these openings to close or open as desired. The silo should be lathed on the inside and plastered with cement, which may be re-washed with cement after a few years' use, should any small cracks open. Thus the silo will be kept perfectly air-tight. Or, if thought better, it may be boarded up on the inside and tar paper placed upon these boards to which a coat of hot coal tar has been first applied, which will act like paste in applying wall paper. The walls of the silo may also be carried to any desired height and should correspond with the height of the outer wall plates, and the pitch of the roof gauged to suit. As the floor of the basement is concrete, this should be laid before any partitions are placed in the way, at which time the work may be much easier done. The grade should be laid out by following a circle at an equal distance from the silo wall, and the centre may be kept level, while the stalls should slant slightly to the

neat state without much labor.

The upper flat may be laid out by placing the drive or threshing floor next the silo. To form this posts may be run up from the floor and a frame work built for the upper joists to rest upon above. By this means the whole of the space above the drive floor may be utilized, which floor should be about fifteen feet wide to allow for the curve and give room for threshing, if the barn is intended for grain. In threshing a level jack with the long rope belt may be used as recommended by the fire insurance companies. A track for a horse fork may be run around the centre of the space next the silo. With regard to the upper flat there are several ways of making use of it to advantage, which the proprietor must contrive for himself, but here there is any amount of storage room for feed, bedding, as well as for implements, etc.

Don't forget, if you have a rich neighbor, to give him a day's work. You lose a good many half days in the year and you won't miss it, and rest assured he will never forget it. Your turn may come some day.